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FALL WATER SUPPLY SUMMARY FOR NEVADA



U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Collaborating with

NEVADA DEPARTMENT of CONSERVATION
and NATURAL RESOURCES
DIVISION of WATER RESOURCES

Data included in this report were obtained by the agencies named above in cooperation with Federal, State and private organizations listed inside the back cover of this report.

AS OF
OCT. 1, 1975

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

*Cover Photo: Cabins near Sacajawea Snow Course
in Bridger Mountains, Montana.*

SCS PHOTO 11-P480-15

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 111, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	204 E. 5th. Ave., Room 217, Anchorage, Alaska 99501
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



WATER SUPPLY OUTLOOK FOR NEVADA

NEVADA'S 1975 IRRIGATION WATER SUPPLY WAS MUCH ABOVE AVERAGE. THE PEAK SNOWPACK WAS ABOUT ONE MONTH LATER THAN USUAL THIS YEAR. THIS DELAYED THE RUNOFF ACCORDINGLY.

EASTERN SLOPE SIERRA STREAMS FLOWED 127% TO 159% OF THE 1958-72 AVERAGE. THE HUMBOLDT AND TRIBUTARIES WERE 125% TO 285% OF AVERAGE. THE HUMBOLDT RIVER AT PALISADES HAD THE LARGEST APRIL-JULY FLOW SINCE 1952. THE SNAKE RIVER TRIBUTARIES IN THE NORTHEAST CORNER OF THE STATE FLOWED 212% TO 239%.

RESERVOIR STOPAGE IS EXCELLENT, AS REFLECTED BY THE ABOVE AVERAGE RUNOFF. THE EAST SLOPE SIERRA STORAGE IS ABOUT 135%; THE OWYEE BASIN STORAGE, 253%; AND THE COLORADO RIVER STORAGE, 115% OF AVERAGE.

The Eastern Slope of the Sierra river flows varied from 127% on the Little Truckee, West Carson, and West Walker, to 159% on the Carson River near Fort Churchill. The date of low flow on the East Carson near Gardnerville was August 2, compared to a July 20 average. Streamflow occurred, so there was minimal damage from runoff.

The Humboldt River flowed more water for the April-July period than any year since 1952. The flow during July was a maximum. Tributaries to the Humboldt varied from 127% on Lamoille Creek, to 235% on the North Fork at Devils Gate. Streamflows in the Owyhee and Snake drainages were 212% to 239% of average.

Flood damages were moderate to severe in the Owyhee, Bruneau, and Jarbidge drainages and their tributaries. Slight to moderate damage occurred along the Humboldt. Roads, bridges, and hay meadows were affected.

Small streams in central and eastern Nevada produced above-average flows. The streamflow from the Toiyabe range near Austin was much above normal. Some flooding occurred, causing moderate damage.

Reservoir storage is excellent, with most storage above last year's. The larger reservoirs, Wild Horse, Rye Patch, Tahoe, Stampede and Lahontan, are much above average; they provide water users some assurance of a good supply for next season.

Fall soil moisture measurements indicate the soil mantle is dry, reflecting a dry summer season.

APRIL - JULY 1975
NEVADA STREAMFLOW FORECASTS
AND
OBSERVED STREAMFLOW

The following table contains April-July forecasts made during the past winter. Observed streamflow quantities are provisional and were furnished by the U. S. Geological Survey.

FORECAST STREAMS	April - July Streamflow (Thousand Acre-feet)						Observed Average 1975 as % of 15- yr. Avg.
	Forecast				Observed	Average	
	Feb.	Mar.	Apr.	May			
	1	1	1	1			
	1975	1975	1975	1975	1975	1958-72	
Little Truckee above Boca, CA ¹		95	115	129	113	89	127
Truckee at Farad, CA ¹		280	350	416	367	267	138
Lake Tahoe ³		1.4	2.0	1.91	1.92	1.46	132
E. Carson nr Gardnerville, NV		175	215	247	243	182	134
(Date of 200 c.f.s. flow)		7/19	7/26	8/10	8/2	7/20	-
W. Carson at Woodfords, CA		50	60	65	66	52	127
Carson nr Carson City, NV		176	225	251	251	178	141
Carson nr Ft. Churchill, NV		155	NA	27	252	159	159
E. Walker nr Bridgeport, CA ²		66	80	95	98	68	145
W. Walker below Little Walker nr. Coleville, CA	127	144	165	181	184	145	127
Lamoille Creek nr Lamoille, NV		31	38	43	35	28	125
South Fork Humboldt nr Elko, NV		85	94	99	NA*	66	-
Marys River above Hot Springs, NV		40	52	53	65	34	192
N. Fork Humboldt at Devils Gate, NV		44	60	70	75	32	235
Humboldt at Palisade, NV	205	109	250	379	475	193	247
Humboldt at Comus, NV		106	215	319	424	149	285
Martin Creek nr Paradise, NV		18	30	29	24	16	150
Owyhee nr Gold Creek, NV ¹	22	25	35	33	43	18	239
Owyhee nr Owyhee, NV ¹	77	90	115	130	144	68	212

1 Corrected for storage above station.

2 April-August flow, corrected for storage.

3 Maximum rise in feet from April 1, assuming gates closed.

NA Not available.

* South Fork Humboldt nr Elko has been discontinued.

NEVADA STATUS OF RESERVOIR STORAGE

October 1, 1975

Basin and Stream	Reservoir	Usable Capacity (1,000 AF)	Usable Storage - 1,000 acre-feet			15-year Average 1958-72
			1975	1974	1973	
Owyhee	Wild Horse	72	62	50	49	18
Lower Humboldt	Rye Patch	157	142	106	116	89
Colorado	Mohave	1,810	1,385	1,384	1,412	1,402
Colorado	Mead	27,217	20,154	19,326	20,176	17,326
Tahoe	Tahoe	732	589	580	500	445
Truckee	Boca	41	37	39	4	14
Truckee	Prosser	30*	11	15	11	15**
Truckee	Stampede	220	148	193	195	Storage began 8/1/69
Carson	Lahontan	291	167	142	127	120
West Walker	Topaz	59	22	24	12	18
East Walker	Bridgeport	42	18	20	12	15

* Flood control use allocation of 20,000 AF between November 1 and April 10.

** Storage began 1/30/63

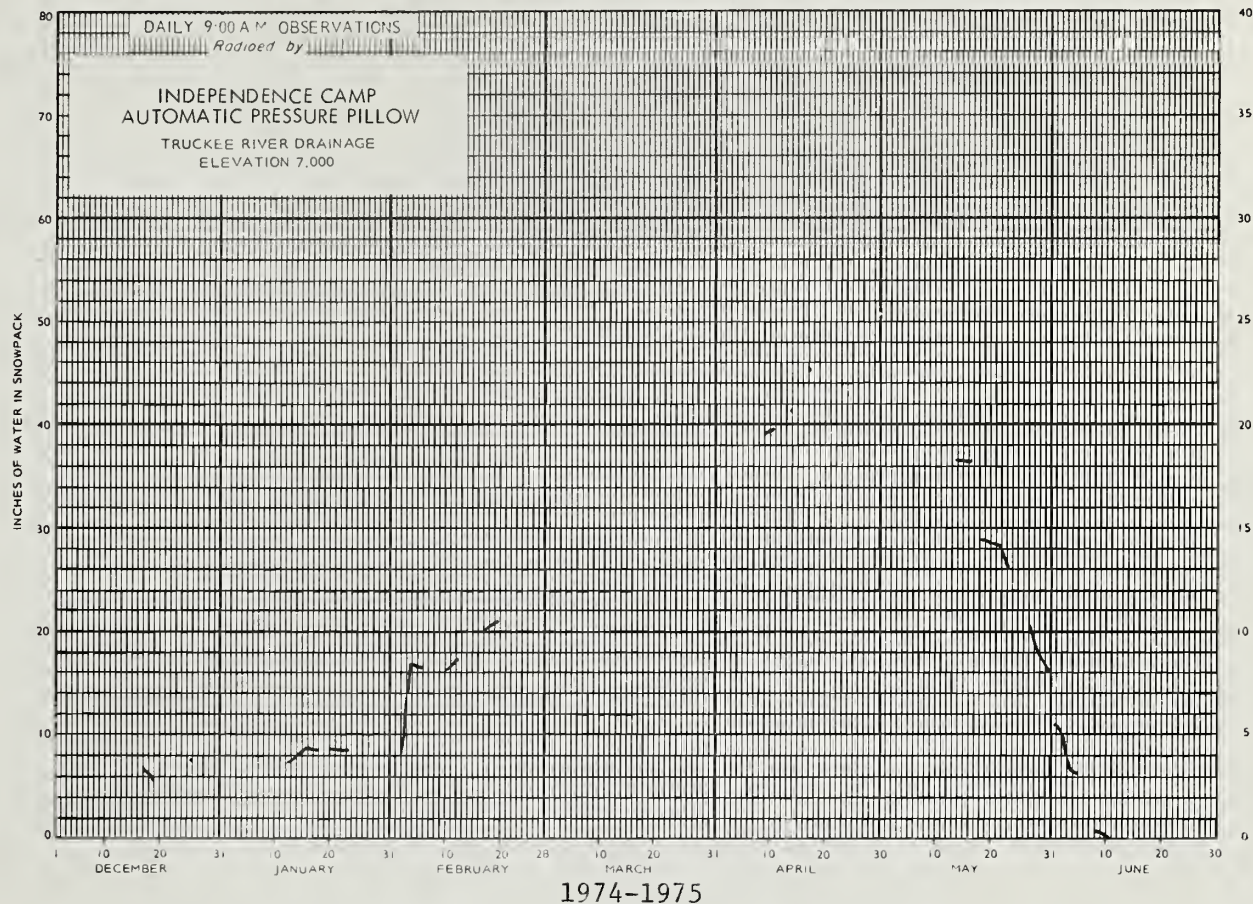
SOIL MOISTURE

October 1, 1975

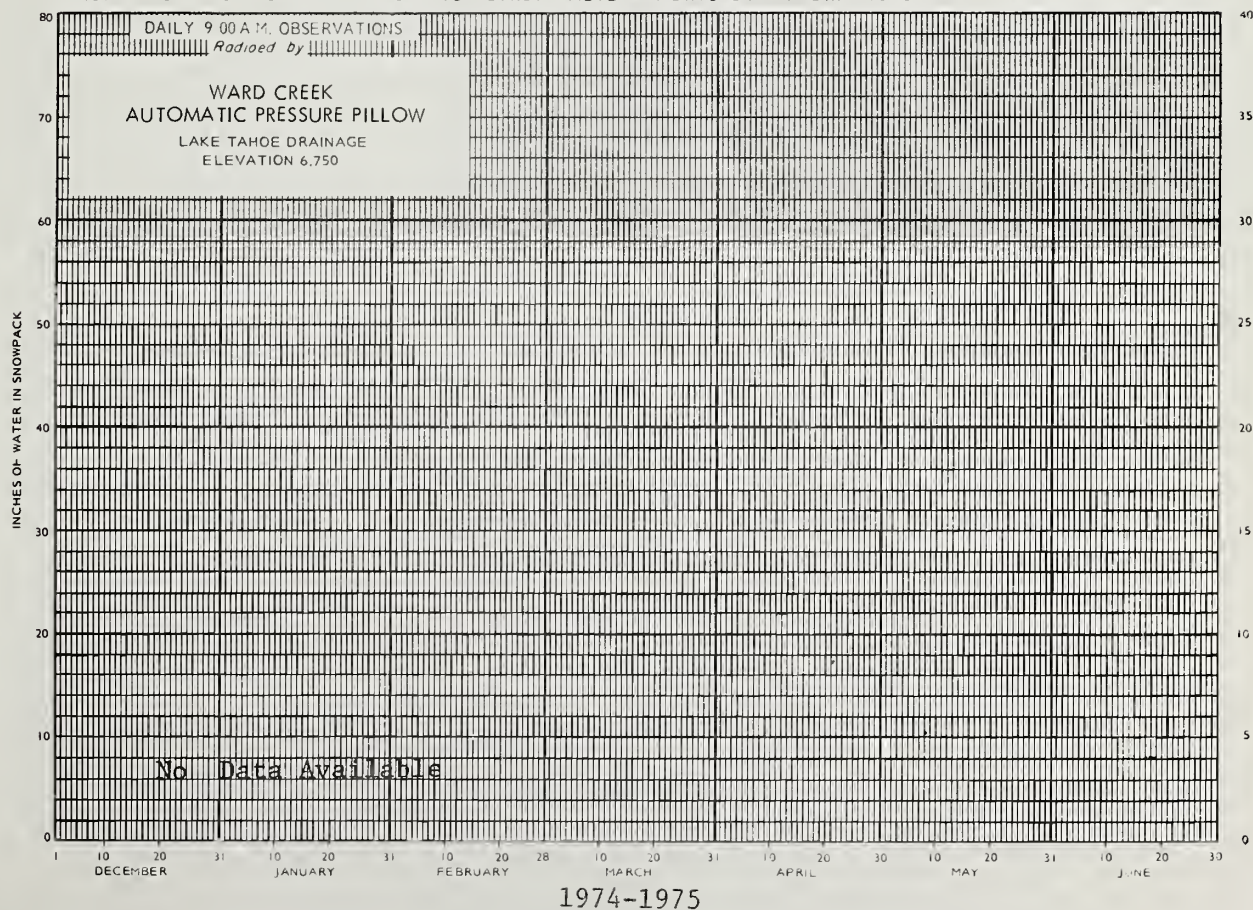
Station	Elevation	Profile Depth	(inches) Capacity	Date	Soil Moisture (inches)		
					This Year	Last Year	2 Years Ago
<u>East Slope Sierra</u>							
Independence Camp	7000	34	6.10	8/27	1.8	1.7	1.8
Marlette Lake	8000	50	3.70	8/25	1.8	1.2	1.1
Sonora Pass	8800	48	8.30	9/15	3.7	4.9	1.3
Virginia Lake	9200	40	5.00	9/15	2.2	2.9	1.7
<u>Humboldt Basin</u>							
Rodeo Flat	6800	42	11.00	9/25	3.0	4.8	4.9
<u>Owyhee Basin</u>							
Big Bend	6700	48	16.70	9/25	10.7	12.5	12.7
Taylor Canyon	6200	48	15.00	9/25	8.2	8.6	7.2
Jack Creek, Lower	6800	48	8.70	9/25	5.3	5.3	4.2



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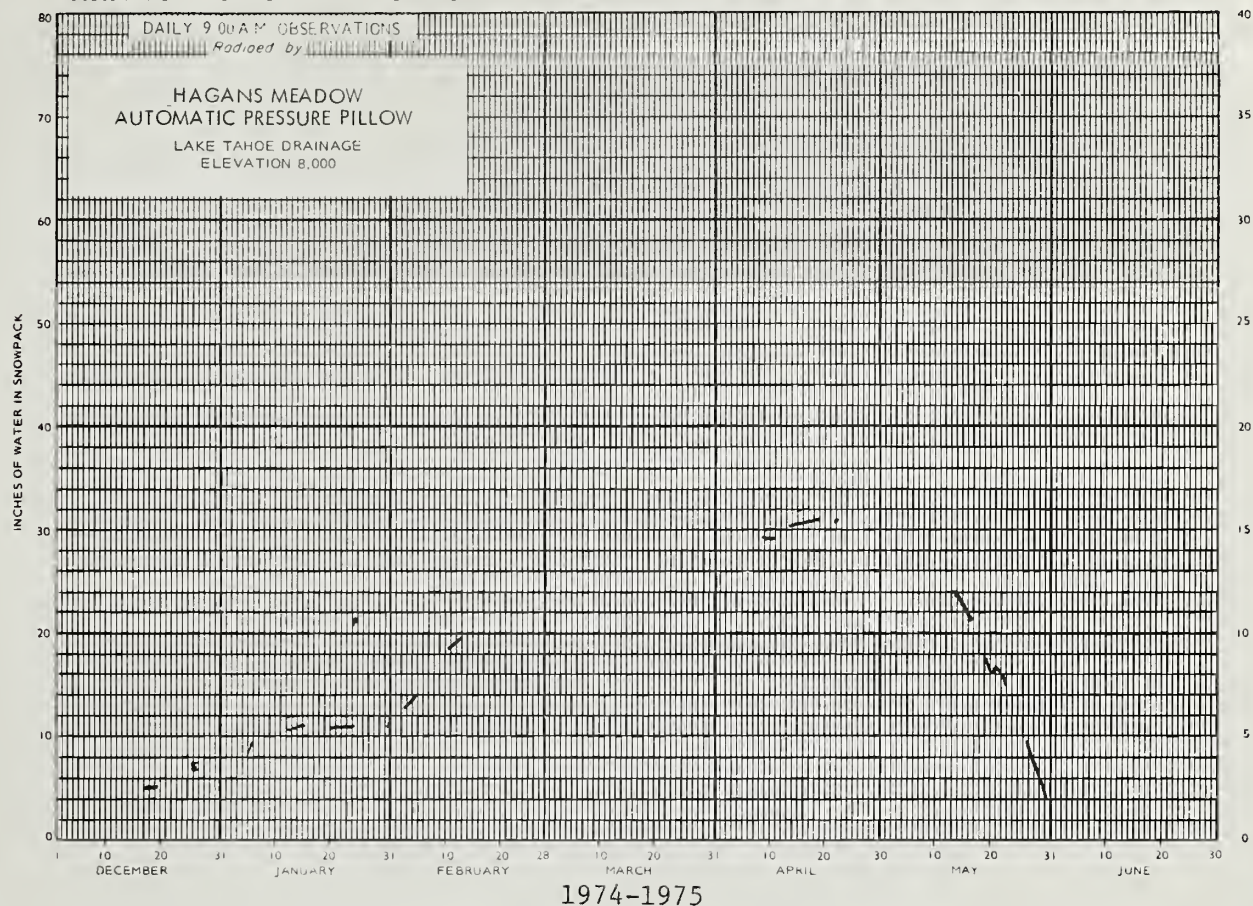


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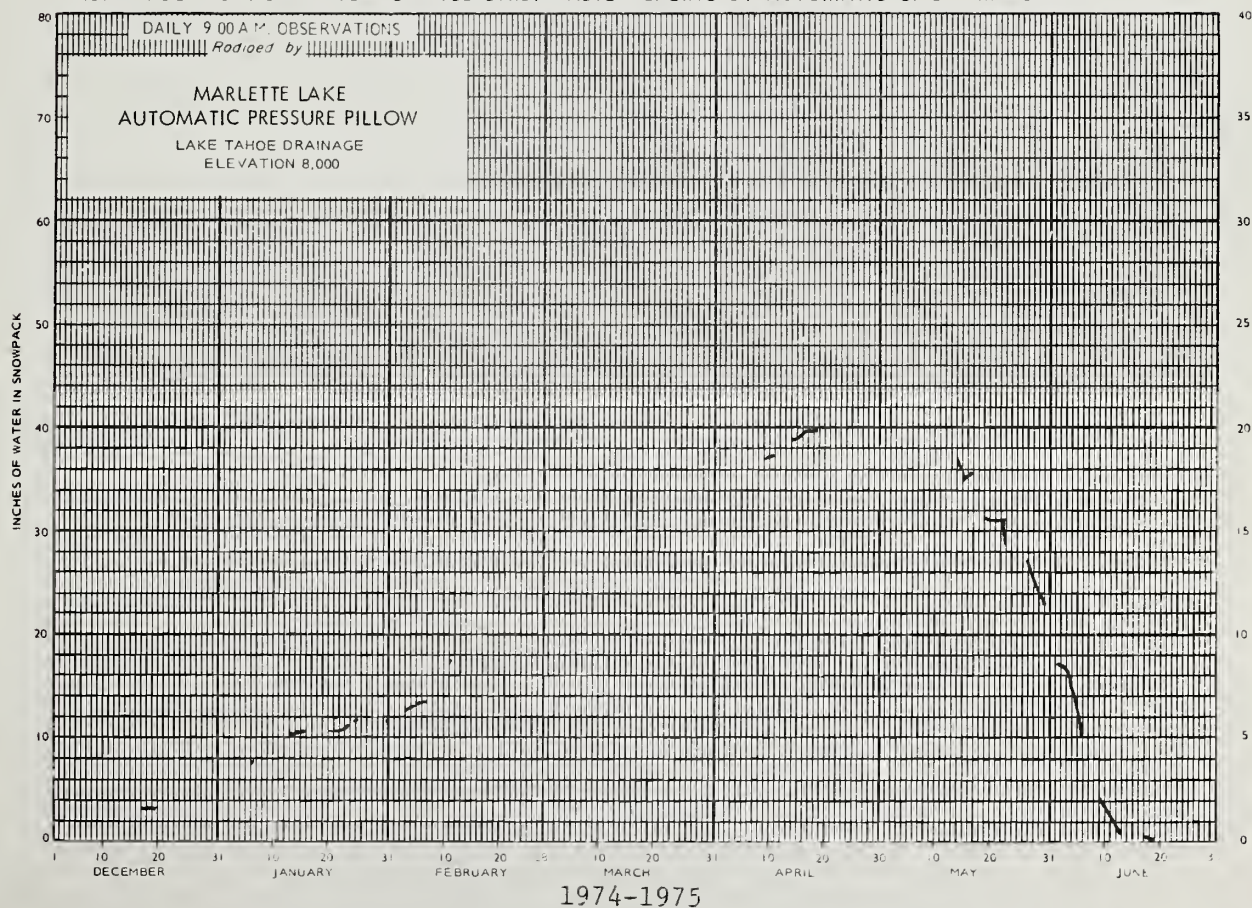




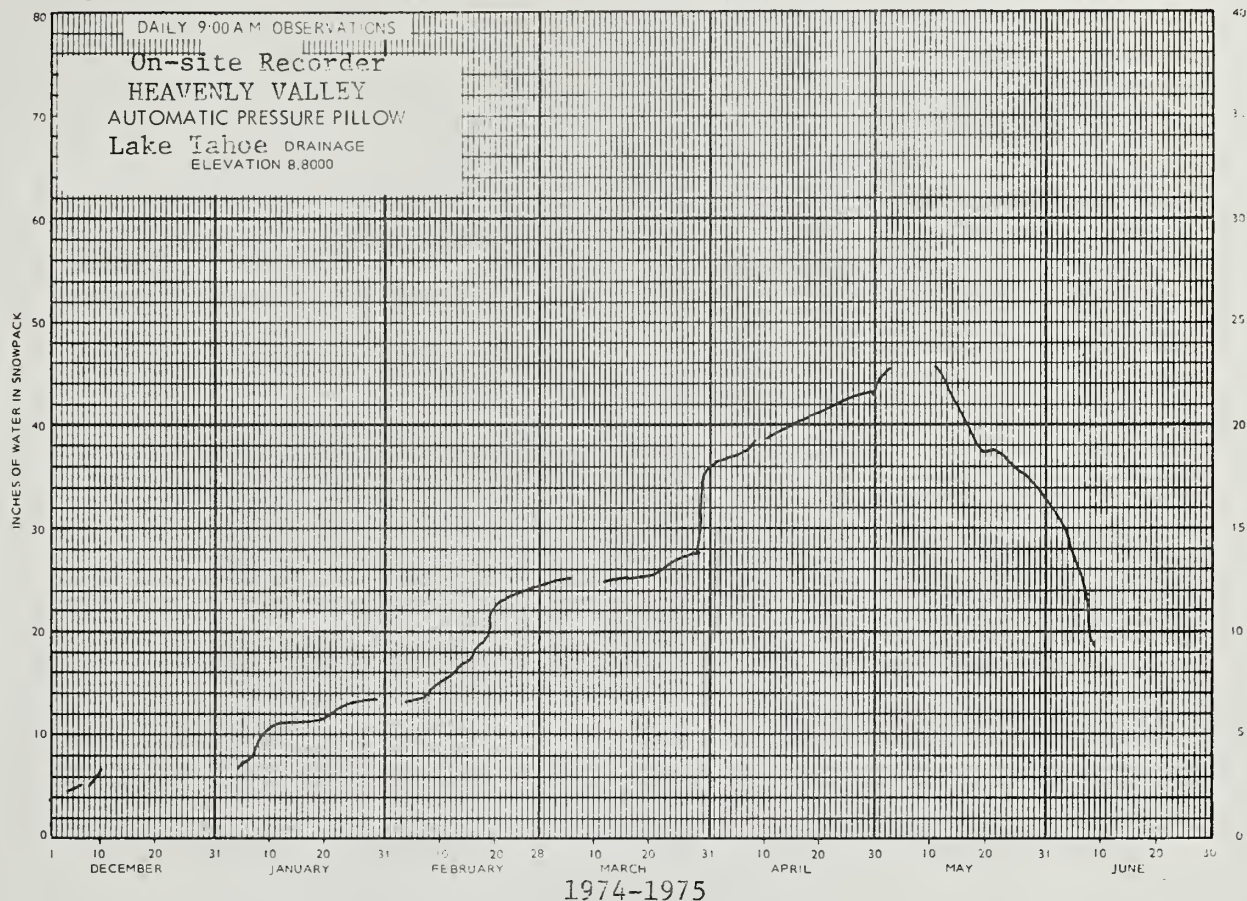
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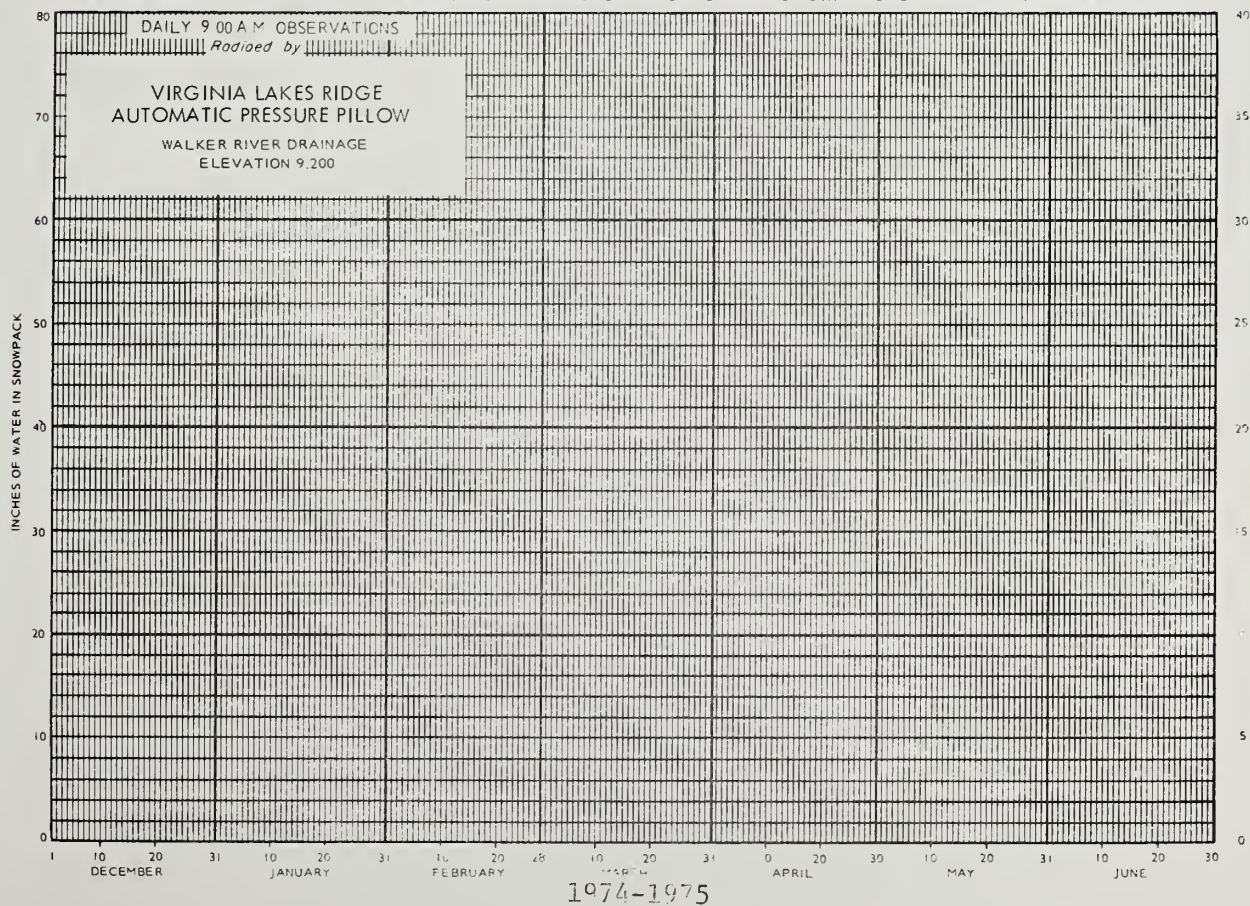
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Agencies Cooperating in Collecting Data Contained in this Bulletin

FEDERAL

- Agricultural Research Service
- Bureau of Reclamation
- Fish and Wildlife Service
- Forest Service
- Geological Survey
- Navy
- Soil Conservation Service
- U. S. District Court - Federal Water Master
- NOAA, National Weather Service

STATE

- California Cooperative Snow Surveys
- California Department of Parks and Recreation
- California Department of Water Resources
- Colorado River Commission of Nevada
- Idaho Cooperative Snow Surveys
- Nevada Association of Conservation Districts
- Nevada Department of Conservation & Natural Resources
 - Division of Water Resources
 - Nevada State Forester
- Oregon Cooperative Snow Surveys
- Utah Cooperative Snow Surveys
- White Mountain Research Station, Univ. of California

PRIVATE

- Amalgamated Sugar Company
- Kennecott Copper Corporation
- Nevada Irrigation District
- Owyhee Project North Board of Control
- Owyhee Project South Board of Control
- Pacific Gas and Electric Company
- Pershing County Water Conservation District
- Sierra Pacific Power Company
- Truckee-Carson Irrigation District
- Walker River Irrigation District
- Washoe County Water Conservancy District

Other organizations and individuals furnish valuable information for the snow survey reports. Their Cooperation is gratefully acknowledged.

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*"The Conservation of Water begins
with the Snow Survey"*

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